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ABSTRACT

The Case Studies in Science Education (CSSE) is a large multi-site case study project with strong obligation for cross-site assimilation and interpretation. Researchers who prepared the CSSE for the National Science Foundation met in retrospective conference in April, 1980. Among other things they discussed the scarcity of guidelines for solicitation and review of proposals for naturalistic case study research. A subgroup of them later prepared recommendations for writing a request for proposals (RFP), reviewing proposals, and project monitoring. Recommendations for writing a RFP were discussed in terms of information need, issues, personnel, selection of sites, research methods, reporting and dissemination, time lines, and multiple stage planning. Recommendations for reviewing proposals were discussed in terms of substantive issues, selection for sites, personnel, methods, time lines, and budget. Recommendations for project monitoring included that the funding agency train project monitors to recognize the difference between providing technical assistance and protecting the funding investment. The funding agency should have a better standard procedure for reviewing/vetoing any changes made in the conduct of the field study than it has had. (Author/RL)

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RECOMMENDATIONS FOR THOSE CONSIDERING THE SUPPORT OF NATURALISTIC CASE-STUDY RESEARCH

Recommendations for writing an RFP
Recommendations for reviewing proposals
Recommendations for project monitoring

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Researchers who prepared the CASE STUDIES IN SCIENCE EDUCATION for the National Science Foundation met in retrospective conference in April 1980. Among other things they discussed the scarcity of guidelines for solicitation and review of proposals for naturalistic case study research. A subgroup of them later prepared this statement.

Case studies can assist the study of educational problems and programs. While they do not tell how typical a phenomenon is, they do provide better understandings of typical phenomena found in particular settings. Like surveys and experiments, they do not produce formal generalizations or program policy directly. When done well they put observers in a position to make better interpretations. They provide readers with vicarious experience and insight into the difficulties that people are having with generalizations and policies. Good case studies indicate strengths and weaknesses in existing policy and illuminate the complexity and contextuality of educational problems.

Social science scholars (more than funding agency people, practitioners, and the public) sometimes disparage naturalistic case studies for their reliance on subjective data. Researchers do have problems verifying observational and interview data, but subjectivity is seldom the major concern when studies are carried out properly. (See Smith, 1979, and Miles, 1978.) The major concern to people used to statistical analyses will often be the small amount of data produced (pertinent to existing questions of readers) for the costs incurred. Comprehensive field research is extremely costly when entirely underwritten by the agency. It is important that agency people understand the potential utility of naturalistic field studies. (See Smith, Dwyer and Prunty, 1980.)

Naturalistic case studies provide readers with knowledge about the actual workings of education, and particulars about how people value and commit themselves to various goals. They provide little "proof" for explanations or "verification" of programmatic decisions. Regularly they tell a story of complexity and idiosyncracy, reiterating that education is largely a matter of personal interaction which sometimes does not conform to rational expectation nor find governmental regulation pertinent. (See Guba, 1978.)

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Case studies sometimes make official action more difficult, rather than easier, because they challenge overly-simplistic models. Contributions from this research may occur in the form of restraining ill-considered plans more than in forging effective plans. Case studies reveal that teachers have goals beyond those of their program and that bureaucratic reorganization and administrative personnel mobility limit an office's support for long term programs. Much of the justification for supporting naturalistic case studies must be based on a belief that greater understanding of the particular workings of education will be useful to readers. (See Easley, 1978, and Stake, 1980a.)

The funding agency may find itself faced with unexpected ethical and legal considerations. The need for less contractual constraint than with other research is apparent--the field researcher at the outset does not know some of the issues that later may be at the heart of the study. The legal department will want work, data, costs, and reports specified in the contract, but good field work is responsive to the situation and--like good business, military, sport, and instructional endeavor--must reserve major resources for seizing on targets of opportunity and shoring up against unforeseen obstacles. There are likely to be political reactions to the conduct of the study which divert the attention of the researchers. There are considerations of rights of human subjects, confidentiality of data, and the customs of respect that impinge upon the researcher, and upon the funding agency too.

A funding agency can expect to gain important benefits from case study research but can expect to incur different costs (including attention to matters mentioned in the previous paragraph) than with other types of research. It behooves the people of an agency to have its contractual, proposal-review, and project-monitoring activities organized accordingly.

A FEW RECOMMENDATIONS TO THOSE PREPARING AN RFP CALLING FOR NATURALISTIC CASE STUDIES

We have not examined the matter of preparing an RFP from all the many aspects of agency and professional need. Our several recommendations here are drawn especially from collective experience with CSSE, a large multi-site case study project with strong obligations for cross-site assimilation and interpretation.

Information need. It is essential that the RFP point out to potential researchers what is seen to be agency, professional and public needs for information. Citations from the literature would be useful. If agency decisions or policy are likely to be contingent on the findings, this should

be indicated. It would be wise to suggest that the researchers will see additional needs that can be served with the intended study. How the study will interface with other studies can be mentioned. These statements of information need should be the RFP's major indication of scope and thrust of the solicited research.

Issues. Usually, the largest benefit can be obtained from case studies when issues are determined by activities and concerns found in the field. Therefore it is desirable not to overly predetermine what the main themes, hypotheses or episodes will be. Still, the RFP cannot effectively indicate information needs without referring to some pressing (general and situational) educational questions. (See Stake, 1980b.) It should be made clear that the selection of issues is a matter of negotiation between agency and researchers and--as well--between the theoretical conceptualizations of researchers and their experience in the field. The RFP should indicate a list of potential issues and expect the proposer to present a more refined list, and to indicate how the list would be further refined during the course of the study.

Personnel. The most critical responsibility of the RFP is to get the right researchers assigned to the work. The supply of case study researchers is not a shelf-full of interchangeable parts. There are only a few with the experience and the competence to do the work well. Each researcher will do the work in a somewhat different way, regardless of how tight the RFP blueprint is. (See Smith and Dwyer, 1979.) The RFP should point out that it is expected that there will be sustained participation by the key persons designated in the proposal. Procedures for reassignment to substitutes or delegation to subordinates should be spelled out to the agency first in the proposal and later, as circumstances dictate (of course they always do), during the conduct of the study. Agency failure to insist upon the continued involvement of fully qualified researchers has been a major weakness in many funded research programs in the past twenty years. (See Lindblom and Cohen, 1979.) The RFP should make this priority clear.

Selection of sites. If it is important to the agency, the number of and characteristics of sites should be indicated. Much should be left to the proposer. The RFP should ask for the proposer's detailed plan for site selection. It should not be suggested that a random selection of sites will be best. (The way the proposer deals with this responsibility is one of the best ways for the proposal reviewers to recognize competence in research design.) The degree to which it is seen as important that the sites be representative of the nation (or some other entity) should be indicated, but it should be realized that a high degree of representativeness may be too costly and unrealistic an ideal for case study research. The site selection plan will have a huge influence on the project budget. Usually the agency will have a dollar amount already in mind. The RFP should (in effect) invite the researchers to show what can be done to address the information needs within that budget without imposing unnecessary site selection requirements.

Research methods. It is recognized that an agency will sometimes have a need for certain types of data, such as on-site observations, or an aversion to certain types, such as telephone interviews. It is helpful to proposers to know it. Usually it is inappropriate for the RFP to say much about method, but to ask (of course) for explication and example of the proposer's intended methods. Whether or not cross-site assimilation--hugely expensive and incredibly difficult in a large study--is important should be indicated. The quality of the individual case study and the quality of the collection of case studies are to some extent in contention. The diligent field worker is likely to become an advocate for the quality of representation of his/her own site(s), and have less interest in shaping that representation to fit the most useful collection.

It is desirable for the RFP to indicate that the reviewers will be looking for statements on access to sites, roles to be played by researchers on site, protection of the rights of human subjects, rules for handling confidential data, and methods of verification of data.

Reporting and Dissemination. Here too the agency should make known any requirements it has for reports or dissemination, but not to make early commitment as to what will be the best means for expressing and exchanging the findings. Initial ideas from proposers should be solicited but it should be clear that it is expected that the format and lines of communication are to be determined later. Some of the dissemination responsibility should be assumed by the researchers and such expectation should be reflected in the budget, but the final level of expense as well as the means should wait until it is apparent what there is to disseminate.

Time lines. Even very experienced field researchers underestimate the time needed to complete the study after on-site work is complete. If other researchers are to interpret or assimilate their reports within the project, additional underestimates are likely. The RFP should indicate the importance of clear plans for the use of time (and whether or not deadlines are in fact important) but should also indicate that optimum use of the calendar cannot be fixed in advance and that the time allocations should be refined and renegotiated during the conduct of the study.

Multiple stage planning. The above recommendations are partly based upon beliefs that naturalistic case studies require progressive focusing; that it quickly lowers the quality of the research to have too many fixed specifications in the RFP, proposal, and contract; and that the agency should participate in continuing review of progress and support refinement of the research plan. To the extent it can, the RFP should indicate how the agency will monitor the work and review (for approval or disapproval) major changes in focus on issues, reallocation of personnel resources, and reassignment of personnel.

A FEW RECOMMENDATIONS TO THOSE REVIEWING PROPOSALS FOR NATURALISTIC CASE STUDIES

We do not suggest that the following are all the major considerations in selecting the highest quality proposals. From our experience with the CASE STUDIES IN SCIENCE EDUCATION we felt the following were general considerations worthy of attention. We think that reviewers of case study proposals should be primarily concerned about the qualifications of personnel and about the adequacy of arrangements for field study.

Substantive issues. Proposals will differ greatly in the extent to which they are committed to etic (prespecified, researcher-oriented) issues or to emic (found at the site, subject-oriented) issues. There are sound rationales for either. Etic issues should be discussed in the proposal with due regard to related theories, practices, and existing research findings. Emic issues cannot be predetermined, but the proposal should indicate some anticipation of them, perhaps in the form of foreshadowing questions, expectations, or readiness of the researcher to probe certain topics. (See Smith, 1979.)

It is expected that during the course of the study the issues will change to some extent--in priority, content, complexity, and the like. When such changes occur it is more a sign that "the method" is working than an indication that it is failing. The reviewers should know the procedures of the sponsoring agency to monitor such changes and note the likelihood of good communication with each proposer. (See Smith and Dwyer, 1979.)

Selection of sites. To proposal reviewers, site selection may appear to be one of the most difficult problems. Since a small number of cases cannot adequately represent a population anyway, the ideas of survey sampling are not very appropriate. Random sampling usually is to be avoided. For most complex educational problems, a random sample probably would not provide better illumination of the problem and of efforts to alleviate it. A sample chosen by the researchers, known by them to be places where the relevant phenomena occur, and accessible to them, is more likely to provide understandings. Representativeness and typicality cannot be assured with any procedure. Much must be left to the ultimate reader to decide how appropriate the case study is for generalization. (See Stake, 1980a, and Hamilton, 1979.)

In most research the populations are stratified to study how prevalent the effects are under different conditions. Prevalence (typicality) is usually not what case studies reveal. Stratification of cases in multiple-site case study research is done to suggest the range of workings of the phenomenon, to portray its complexity, and to give readers opportunity to relate to instances of their own experience and concern.

The sites should be selected to satisfy certain criteria, especially to consider the likelihood of targeted phenomena occurring there. For example, if teacher staff development is being studied, sites should be examined before selection to see that relevant in-service training is occurring there. Other sites selected should have in-service training of a different kind, or under different conditions. Replication in similar situations will sometimes be desirable, but diversity of conditions usually should be considered more important. Intended users may have certain expectations regarding the sample. Characteristics of sites often felt important by readers and researchers include: rural-urban and other geographical distinctions, uniqueness of certain activities in each setting, age and experience of educators and students, social and economic constraints on change, etc. The proposal should indicate which criteria of stratification are important for initial selection of sites (and of course for later replacement of withdrawn sites).

Personnel. Naturalistic case study research is greatly dependent on the sustained involvement of competent personnel. Solid evidence of availability and past experience of specific researchers are essential requirements in proposals. In a large study it is likely that some key person will not continue until termination of the project. Therefore the proposal should give assurances that well qualified replacements can be obtained. The proposal should indicate expectation that the agency will critically review substitutions and delegation of work assignment.

Famous researchers are not necessarily better than unknown ones, but previously successful experience in field work is one of the few quality-control assurances for an agency considering the support of naturalistic field study. One of the most common suggestions to keep down costs will be to use graduate students being trained in ethnographic methods as field workers. This is risky. The talents for doing good field work seem to come slowly to the best researchers, and not at all to many.

Apprentices should be supported, one way or another (see Smith and Dwyer, 1979), but for funded research a novice should not be placed at a site without direct supervision and collaboration in data gathering. It is highly desirable that the portfolio of previous field work for principal data-gatherers at each site be read carefully to establish his/her qualification for this kind of research.

Methods. Naturalistic field study will require a number of different methods, some of which perhaps may not be anticipated at the time of proposal writing. The proposal should indicate what methods seem likely to be useful, and some of the contingencies that might require major change in plan. Since almost every researcher uses a certain combination of method with considerable regularity it is useful to look at previous research completed to get a further idea of how the proposed field work is likely to be done. (See Wolcott, 1976.)

According to some observers, field research costs can be pared and analysis improved by using standardized observational checklists or computer processing of natural language transcripts. Neither effort has been satisfactory for naturalistic study. The first has lost too much contextual and interaction information. The latter is not yet technically feasible, probably because of the limited ability of most persons to talk with computers. Standardizing observations and analysis are not likely to be byproducts of any single study, even one budgeted in the millions--so proposals to rely on such standardization should be looked at skeptically.

Steps to be taken to verify data should be a key part of the proposal, possibly spelling out the means to triangulate and disconfirm findings and interpretations (Campbell and Fiske, 1959, and Denzin, 1970). (Efforts to give strong confirmation to CSSE case study findings with national survey data were not successful.) (Stake and Easley, 1978.) It probably is less important to purge the data of subjective views, both of informants and researchers, than to provide readers with sufficient information to make their own assessments of the validity of what is reported. One way of doing this is to include thorough description of places, events, and issues that are unknown to readers--along with briefer descriptions of things more commonly known. Since these are relatively routine matters for experienced field workers, their proposals should not be expected to make a full defense of their rationale for validation nor should they be expected to educate panel members who are not knowledgeable. However, all proposals should outline the grounds and activities on which verification will be based.

Access plans, rules of confidentiality, and procedures (if any) for persons observed and interviewed to review what is written about them, and assurance that field personnel are adequately involved in the final write-ups, are important parts of the proposal. The reviewers should try to see that the proposers have experience in these matters.

Time lines. The quality of the research effort is little indicated by the original allocation of time, but a time line can indicate inadequate attention to extremely time-consuming responsibilities. Our suggestion for a rule of thumb is to allocate, for each day in the field at each observation site, an additional day of planning and two additional (some researchers say three) days for analysis and write up. If it is a multiple case study project with different people at different sites, then an additional day of assimilation is needed. And if people other than those in the field are doing the cross-site assimilation, then a second and third additional day are needed. (We recognize there is an argument here for preferring proposals which concentrate on only a few sites and involve only a few (or one) team-working researchers who will do their own assimilation across sites, the total research-personnel (including on-site, liaison, resource, and management personnel) time allocations should be at least six times the allocation of time on-site.

Budget. Case study work is expensive, especially if funds are to fully cover personnel and institutional costs. Of course, one way to keep directed research costs down is to piggy-back on an ongoing research program. It is not unusual to get an institutional contribution (the researchers' salaries are already at least partly covered). It can be to the agency's advantage to collaborate with research efforts already contemplated and greatly desired by qualified researchers. Obviously the danger of agency questions getting short shrift in the mix needs attention.

Budgets are difficult to evaluate. It might be of some value to know that with a CSSE of $300,000 in 1977, about one third of it went to central management and assimilation costs and about $20,000 for each case study. Actually some case studies were much more expensive than others. We would not say that there was a high degree of correlation between cost and quality. Clearly 15 week studies usually provided more good information than five week studies and usually, but not always, cost more as well.

RECOMMENDATIONS FOR PROJECT MONITORING

Experience in a number of programs (see Gideonse, 1980, and Smith and Dwyer, 1979) has shown that it is a mistake for the funding agency to take a "co-director" or "staff-development" approach to project monitoring. In an effort to assure high professional standards of research design or in an effort to learn everything an agency should learn from research, a well-intending and personable project monitor can be intrusive and hurtful. Strong efforts to assure the best work can undercut the "best-possible" productivity. (This did not occur in CSSE. We were successful partly because we had two--one after the other--highly knowledgeable, facilitative, attentive but non-intrusive project monitors.) Restraint should be practiced by project monitors--but not to the point of being merely attentive. The investment of the agency and the providers of funds (usually taxpayers) must be protected.

The agency should train project monitors to recognize the difference between providing technical assistance and protecting the funding investment. Their role is not to coach the researchers or to seek out the best course of action, but to recognize developments that violate the contract or jeopardize the investment. Monitors do need to consider what users will find credible.

With naturalistic research the agency should provide more management structure than a monitor person. Naturalistic research requires recurring design of the research and renegotiation at least of the detail of the proposal (which becomes the contract). At the time of proposing, and even later at

the time of contracting, it is not possible to guarantee the availability of key personnel. Substitutions of various kinds are inevitable, and researchers do not always substitute goods of quality equal to those once proposed. Additional means of maintaining effective review of personnel, reallocation, and redirection is needed. The funding agency should have a better standard procedure than it has now for reviewing (and if necessary, vetoing) the changes being made in the conduct of the field study.

One possibility is to engage the proposal review committee on a continuing basis to review major implementation and revision of the work. Another possibility would be to have a standing panel of researchers for quality control. The purpose would not be technical assistance, but only assurance that reasonable substitutions are being made and that the development of the study is within the bounds of what is expected in this kind of research. Information on these decisions would come from the project monitor. He or she would continue to have the responsibility of maintaining a thorough understanding of the progress of the work but would not be as alone as now in the responsibility for assuring that the agency's investment has not been jeopardized by the project's responses to changing environment.

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